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AUTHOR Ashmore, William H.
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ABSTRACT

This paper presents an alternative approach to evuating Individually Guided Education (IGE) which should be prerequisite to the conduct of output evaluation. To this end, it introduces a specially designed instrument, the "IGE Implementation Survey," which is capable of systematically collecting information on the degree to which schools which claim to be IGE, are actually operating in the IGE mode. The type of assessment proposed here, implementation evaluation, considers the developmental aspects of IGE. As such it provides improvement-oriented information to decision-makers which allows them to document where they are in implementing the IGE system, and to identify program areas where modifications and improvements are needed. To be sure of its proper role and function, it is important to note that implementation evaluation of IGE does not preclude, nor does it substitute for output evaluation. Rather it should be considered a refinement of and prerequisite to output evaluation in that it allows for analyses and interpretations of program output within the context of possible differentiated levels of the independent variable (IGE) which may exist. (Author)

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TOWARD AN EVALUATION OF INDIVIDUALLY GUIDED EDUCATION

by

William H. Ashmore
Coordinator of Evaluation

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Introduction

Recent years have witnessed a dramatic change in public attitudes toward spending on education and particularly on educational innovations like Individually Guided Education (IGE). Consonant with this trend toward fiscal conservatism is the increased emphasis on optimizing the impact of resources that are allocated to ensure a greater return for the dollar. Not surprisingly then, the public and educators alike are looking more favorably on management tools such as PPBS, MBO and a common component of each—evaluation—as desirable ways of improving educational productivity in today's era of fiscal austerity. There is little question that this new emphasis on educational productivity will require a shift away from the traditional focus on educational process to a greater articulation and measurement of program output. Now, more than ever, the science of evaluation will have to live up to its billing as a systematic process of determining the merit or worth of programs by an analysis of the attainment of objectives. Even though the institutionalization of this output-oriented role for evaluation is much needed and a welcomed by-product of the accountability movement, it may inadvertently lead to some serious oversights in the application of evaluation and especially in regard to the assessment of innovations; oversights which may lead to invalid conclusions about a program's worth, and worse yet, the elimination of programs which show a great promise of success.

This paper presents an alternative approach to evaluating IGE which should be prerequisite to the conduct of output evaluation. To this end, it introduces a specially designed instrument, the "IGE Implementation Survey," which is capable of systematically collecting information on the degree to which schools which claim to be IGE, are actually operating in the IGE mode. The type of assessment proposed here, implementation evaluation, considers the developmental aspects of IGE. As such it provides improvement-oriented information to decision-makers which allows them to document where they are in implementing the IGE system, and to identify program areas where modifications and improvements are needed. To be sure of its proper role and function, it is important to note that implementation evaluation of IGE does not preclude, nor does it substitute for output evaluation. Rather it should be considered a refinement of and prerequisite to output evaluation in that it allows for analyses and interpretations of program output within the context of possible differentiated levels of the independent variable (IGE) which may exist.

IGE Operations

IGE is a new and comprehensive system of elementary education which was developed and is continuing to mature through the extensive research and development activities of the University of Wisconsin Center for the Study of Cognitive Learning. Since its inception at the Center in 1965, the evolution of IGE as a total system of education has been marked by the significant contributions of the Kettering Foundation through its /I/D/E/A/ branch and through the cooperative efforts of state and local educational agencies which have been engaged in field tests, research and feedback on IGE as an effective and workable product.

During this period of time, the potential of IGE as an educational innovation has been well documented. Incorporated into the IGE system are some of the most promising educational innovations of recent years including peer instruction, open classrooms, continuous progress learning, team teaching, differentiated staffing, multi-age grouping, programmed learning and computer-assisted instruction.[1] These innovations and others are embodied within the seven major components of the IGE system which include:

1. an organization for instruction, related administrative organization at the building level, and another arrangement at the central office level, together called the Multiunit Elementary School (MUS-E).

2. a model of instructional programming for the individual student.

3. a model for developing measurement tools and evaluation procedures.

4. curriculum materials, related statements of instructional objectives, and criterion-referenced tests and observation schedules.

5. a program of home-school communications that reinforces the school's efforts by generating the interest and encouragement of parents and other adults whose attitudes influence pupil motivation and learning.

6. facilitative environments in school buildings, school system central offices, state education agencies, and teacher education agencies.

7. continuing research and development to generate knowledge and to produce tested materials and procedures.[2]

A reflection of the promise of IGE as an effective means of meeting the individual needs of students can be found by tracing its growth: Only three Wisconsin school districts were involved with the implementation of IGE in 1966. Today a pattern of schools implementing IGE ranges on an almost national basis, with some estimates suggesting that there may be up to 10,000 multiunit schools in operation by 1976.[3]

The Need for an Implementation Evaluation of IGE

The rapid increase in the number of schools adopting the IGE system has been accompanied by a voluminous increase in the requests for information on the impact of IGE on parents, teachers, and students. Traditionally, output evaluations using experimental and quasi-experimental designs for research have been applied in response to these requests. However, output evaluations are limited by their very nature—they provide information near the end of the project life cycle or sometimes in post hoc fashion. Consequently they have little value of a developmental nature, or add little to improving a project at key points in its life. In addition output evaluation strategies are usually tied to problems of measurement including test development and/or use with broad issues such as criterion-referenced tests and norm-referenced tests at the core of the debate when an individualized program like IGE is the independent variable being examined.

Recent concerns in the literature have identified even more serious limitations in the use of output evaluation strategies in assessing educational innovations. W.W. Charters described the possible risks of measuring and appraising "non-events" in program evaluation that considers output dimensions alone.[4] In addition to the Charters treatise, other researchers who have studied innovations have suggested the need for alternative evaluation methodologies to consider the developmental aspects of programs, and to document the degree to which the specified elements of an innovative program have been implemented.[5] Such an evaluation, and one which appears most appropriate for the evaluation of IGE, is implementation evaluation.

Implementation evaluation requires the evaluator to compare actual program operations at various points in time with the initial program plan. In contrast to the output approach, implementation evaluation asks the question: Have the process objectives developed for a program been carried out as planned? The answers to this question can provide valuable information to decision-makers to ensure that an existing program conforms to the operational guidelines prescribed for it. Within the IGE context, implementation evaluation documents the degree to which an IGE program in action represents the formal IGE model and points out areas where the IGE operations are congruent or discrepant with the formal IGE model.

Moreover, the rationale for an implementation evaluation of IGE becomes even clearer when one considers the conclusion of a follow-up process evaluation conducted by Roderick Ironside of the Educational Testing Service.[6] Of the principle conclusions cited in this study, several have direct implications for the need of implementation evaluation studies of IGE. For example he found that schools indicated a wide range of obstacles to effective implementation of IGE; that "Identifying with MUS-E/IGE" has different meanings to different schools, and that cases did exist where "the label of identifying with MUS-E/IGE" was more evident than were the actual changes in school practice.

Based on these findings alone it appears likely that in many cases the employment of output evaluation strategies, i.e. analysis of achievement test scores, without any consideration for examining and documenting the degree of implementation of actual IGE operations, may lead to erroneous judgments about program effectiveness.

The "IGE Implementation Survey"

In response to this call to investigate the degree of implementation of innovative programs, the Wisconsin Department of Public Instruction, out of a field-based request to evaluate IGE, initiated a project to construct, validate and administer an assessment instrument to determine the degree to which an IGE program in operation resembles the formal IGE model, and to determine which implementation areas of the program need improvement or modification.[7] The resulting instrument, the "IGE Implementation Survey," is presented and described on the following pages.

The IGE model and its seven operational components served as the basis for designing the instrument and a systems approach to an implementation evaluation of IGE. Although the ideal method of assessing implementation of a program might include multiple measures of program operation using interviews, questionnaires, observations, survey methods and anthropological research techniques during the various stages of the life of a project, these methods take considerable time, effort, dollars, and highly trained professionals to ensure the reliable and valid collection of data. It is unlikely that a school district could free up the resources for such analyses. In contrast an appropriately designed and comprehensive instrument like the "IGE Implementation Survey" has several advantages for school decision-makers: It can be administered at various points in time; it can be administered to groups and individuals; it requires approximately 20 minutes for completion; and it can be self-scored or scored and reported at low cost through the Wisconsin Department of Public Instruction.

Though the use of a one-shot instrument to evaluate and document program operations may be unique to IGE, it has been used in other system's appraisal areas. Knezevich, using the precepts of PPBS theory, developed an instrument to evaluate the implementation of PPBS operations.[8] The Knezevich instrument was composed of criterion outcome statements about PPBS which have to be satisfied in order to certify whether or not a budgeting system is operating in the PPBS mode. The "IGE Implementation Survey" on the other hand consists of a series of process outcomes representative of all operational levels of the IGE system. (Review of IGE literature, interviews with school practitioners and university and state department experts served as the qualitative basis upon which to determine the essential process outcomes.) In sum, a total of seventy-one (71) IGE process outcomes/statements were identified and developed to represent the essential concepts of the IGE system. For each component of the IGE system, the following number of process outcomes were identified.

IGE Component	Number of Process Outcomes
1. MUS-E Organizational Arrangements	17
2. Instructional Programming	11
3. Materials	7
4. Measurement and Evaluation	15
5. Home School Relations	8
6. Facilitative Environments	10
7. Research and Development	3
Total IGE System	**71**

For each process outcome the respondent (assessor) is requested to indicate the degree to which the process outcome is satisfied (implemented) in the IGE program. To collect this information a response continuum ranging from "No Implementation" to "Ideal Implementation" and a "Don't know" alternative was operationally defined, and a scoring key constructed. The response alternative, interpretation and scoring procedures for each are indicated below:

IGE Implementation Survey—Scoring Procedures

Scoring	Response	Interpretation
DK	(Don't know)	Either data is not available or insufficient to determine whether the concept exists and to what degree it exists in the IGE program.
0	(No Implementation)	The concept is omitted or is so inadequate that it has little or no value to the IGE program.
1	(Some Implementation)	The concept is present but it is poorly developed and has limited value to the IGE program.
2	(Adequate Implementation)	The concept is present and sufficiently developed for the purposes of the IGE program.
3	(Approaching Ideal Implementation)	The concept is present in highly developed form, and has a substantial value to the IGE program.
4	(Ideal Implementation)	The concept is present and so well developed that it is an outstanding feature of the IGE program.

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION
THE IGE IMPLEMENTATION SURVEY
PI-PS-Q-40 (2-75)

INSTRUCTION: Please return completed questionnaire to:

MR. WILLIAM H. ASHMORE, COORDINATOR OF EVALUATION
WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION
126 LANGDON STREET
MADISON, WISCONSIN 53702

Dear IGE Participant:

Individually Guided Education (IGE) has been continually expanding and undergoing refinement since its inception. Its growth has been marked by the rapid adoption rate of the IGE model by a substantial number of school districts nationally. Such growth needs to be monitored through carefully devised evaluation and assessment procedures. To this end, the **IGE Implementation Survey** has been constructed to document the degree to which schools have implemented the formal IGE model and to identify program areas which may need modifications or improvements to fully implement according to the IGE mode.

DEMOGRAPHIC DATA

Identification No.	District No.	School District Name	Survey Date

School No.	School Name	Curriculum Area Appraised

A. Please place a check mark to identify the appropriate personnel position that you currently represent: (Check One)
1. ☐ Unit Teacher
2. ☐ Unit Leader
3. ☐ Paraprofessional
4. ☐ Principal
5. ☐ Central Office/Administrator
6. ☐ Program Consultant/Evaluator
7. ☐ Curriculum Consultant
8. ☐ Other (Specify)

B. If you are a unit teacher/leader, please place a check mark to identify the appropriate instructional and research unit that you currently represent: (Check One)
1. ☐ Unit A (1)
2. ☐ Unit B (2)
3. ☐ Unit C (3)
4. ☐ Unit D (4)
5. ☐ Unit E (5)
6. ☐ Other (Specify)

C. Please place a check mark to identify the appropriate response that indicates how long your school has been implementing IGE: (Check One)
1. ☐ Less Than One Year
2. ☐ 1–3 Years
3. ☐ 4–5 Years
4. ☐ 6–10 Years
5. ☐ More Than 10 Years

D. Please place a check mark to identify the appropriate response that indicates how long you have been involved with IGE in your school: (Check One)
1. ☐ Less Than One Year
2. ☐ 1–3 Years
3. ☐ 4–5 Years
4. ☐ 6–10 Years
5. ☐ More Than 10 Years

You are participating in a survey about the **IGE Program** in your community. For each of the concept statements on the survey, please indicate your judgment of the degree to which each concept statement is satisfied, using the following response code.

RESPONSE	INTERPRETATION	RESPONSE	INTERPRETATION
Don't Know	Either data is not available or insufficient to determine whether the concept exists and to what degree it exists in the IGE Program.	Adequate Implementation	The concept is present and sufficiently developed for the purpose of the IGE Program.
No Implementation	The concept is omitted or it is so inadequate that it has little or no value to the IGE Program.	Approaching Ideal Implementation	The concept is present in highly developed form and has a substantial value to the IGE Program.
Some Implementation	The concept is present but it is poorly developed and has limited value to the IGE Program.	Ideal Implementation	The concept is present and so well developed that it is an outstanding feature of the IGE Program.

COMPONENT 1. THE MULTI UNIT ELEMENTARY SCHOOL ORGANIZATIONAL ARRANGEMENT

I. The IGE Program uses an organization for instruction and related administrative organization at the building and central office levels which: (Check One For Each Question)	Implementation					
	Don't Know	No	Some	Adequate	Approaching Ideal	Ideal
1. Includes an instruction and research (I & R) unit.						
2. Includes an instructional improvement committee (IIC).						
3. Includes a system wide policy/planning committee (SPC).						
4. Participates in a league/network (PACT) consisting of school districts using IGE.						
5. Emphasizes shared decision making (management by consensus).						
6. Emphasizes open communication.						
7. Employs a well-defined model of accountability.						
8. Emphasizes differentiated roles/staffing.						
9. Uses a non-graded, multi-aged arrangement for instruction.						
10. Adopts a staffing pattern that:						
A. Employs a unit or lead teacher to coordinate the instruction and research (I & R) unit.						
B. Employs 2 to 5 staff teachers plus a unit leader for each 100—150 students.						
C. Employs 1 instructional aide for each 100—150 students.						
D. Employs 1 clerical aide for each 100—150 students.						
E. Uses 1 intern teacher for each 100—150 students (optional).						
F. Uses 1 student teacher for each 100—150 students (optional).						
11. Designates at least the building principal and the unit leader to participate in the instructional improvement committee (IIC).						
12. Designates the superintendent, building principal(s) central staff consultant(s), school board member(s) and others to participate in the activities of the system wide policy/planning committee (SPC).						

COMPONENT 2. INSTRUCTIONAL PROGRAMMING

II. The IGE Program uses a system of instructional programming which consists of the following processes: (Check One For Each Question)	Implementation					
	Don't Know	No	Some	Adequate	Approaching Ideal	Ideal
13. The instructional improvement committee (IIC) sets broad schoolwide educational objectives.						
14. The instruction and research (I & R) unit identifies a subset of specific instructional objectives for a given group of students.						

(CONTINUED TO RIGHT HAND COLUMN)

COMPONENT 2. INSTRUCTIONAL PROGRAMMING (continued)

II. The IGE Program uses a system of instructional programming which consists of the following processes: (Check One For Each Question)	Implementation					
	Don't Know	No	Some	Adequate	Approaching Ideal	Ideal
15. A pre-test or pre-assessment using either observational, paper and pencil or teacher judgment techniques, is administered to determine the students:						
A. Level of skill development.						
B. Style of learning						
C. Level of motivation						
16. Based on the results of the pre-assessment, behavioral/instructional objectives are developed which are appropriate to the individual needs of the students.						
17. The instructional objectives are clearly communicated to the student.						
18. Individualized instructional programs are designed to help the student attain his/her objectives.						
19. Individual teaching techniques are modified to the variety of grouping patterns used.						
20. A post-test or post-assessment is administered to determine how well each student achieves his/her objectives.						
21. The student's characteristics (as measured in step 15) are reassessed and the students are placed in the appropriate instructional sequence.						

COMPONENT 3. MATERIALS

III. The IGE Program uses curriculum materials which are made available through the following processes: (Check One For Each Question)	Implementation					
	Don't Know	No	Some	Adequate	Approaching Ideal	Ideal
22. A list or inventory of all available software and hardware materials in the school building is generated for review by the teachers.						
23. The instructional staff or a representative committee of staff cross reference these materials to the broad school-wide educational objectives.						
24. The instructional staff select those materials which are appropriate for each student to attain the specific instructional objectives.						
25. The instructional staff are encouraged to develop teacher-made materials and refine the instructional materials already present.						
26. The instructional materials are placed within the school building so that they are easily accessible by the teacher and student.						
27. An instructional materials center (IMC) is established at the school.						
28. The instructional materials center (IMC) is staffed by certified personnel.						

(CONTINUED TO PAGE 3)

COMPONENT 4. MEASUREMENT AND EVALUATION

IV. The IGE Program employs a strategy for measurement and evaluation which: (Check One For Each Question)	Implementation: Don't Know	No	Some	Adequate	Approaching Ideal	Ideal
29. Uses the following techniques in assessing students.						
A. Norm-referenced test(s)						
B. Criterion-referenced test(s)						
C. Work sampling						
D. Observation						
30. Assesses the effect of instruction on student's:						
A. Achievement						
B. Attitudes						
31. Assesses:						
A. How well the IGE Program is delivered into the instruction and research (I & R) unit.						
B. How well the IGE Program is implemented (operated) in the instruction and research (I & R) unit.						
C. How well the IGE Program is coordinated among the multi-unit elementary school organizational levels, E.G. I & R unit, IIC, SPC, PACT.						
32. Assesses the quality and utility of the instructional material.						
33. Results in program improvement and modification						
34. Provides continuous feedback to individual students regarding progress made.						
35. Provides continuous feedback to individual teachers to assist them in improving the instructional program.						
36. Includes a systematic recordkeeping system for each student.						
37. Allows for the easy collection, storage and retrieval of student data.						

COMPONENT 5. HOME-SCHOOL RELATIONS

V. The IGE home-school communications activities (Check One For Each Question)	Implementation: Don't Know	No	Some	Adequate	Approaching Ideal	Ideal
38. Are coordinated by the:						
A. Instructional improvement committee (IIC).						
B. System wide policy/planning committee (SPC).						
39. Have a well-defined procedure for interpreting and reporting the school's progress and problems to the community.						
40. Have a well-defined procedure for interpreting and reporting the student's progress and problems to parents.						
41. Encourage the participation of community volunteers in the instructional program.						
42. Taps community resource persons to share their expertise as a part of the instructional program.						
43. Encourage home-school visits by teachers and parents to discuss student performance.						
44. Include an evaluation component to determine effectiveness of home school relations.						

COMPONENT 6. FACILITATIVE ENVIRONMENT

VI. The IGE facilitative environment activities have been implemented in our school by: (Check One For Each Question)	Implementation: Don't Know	No	Some	Adequate	Approaching Ideal	Ideal
45. Developing and implementing a series of workshops prior to opening of the school year to orient the staff to the multi-unit elementary school IGE Program.						
46. Encouraging unit leader(s) and principal(s) to engage in leadership workshops to assist them in their role performance.						
47. Developing and implementing locally sponsored workshops during the school year to assist staff in planning together effectively.						
48. Seeking department of public instruction (DPI) and university based assistance in implementing IGE.						
49. Providing a minimum of 3 hours a week during school, planning time for the instruction and research (I & R) unit to coordinate their activities.						
50. Encouraging the instructional improvement committee (IIC) to plan together on a weekly basis.						
51. Encouraging staff to participate in university based institutes or take academic courses in IGE.						
52. Participating in member school district league/network (PACT) activities for cooperating IGE schools.						
53. Encouraging the staff to read the IGE materials and guidelines developed at the Wisconsin research and development center for cognitive learning and I/D/E/A.						
54. Encouraging the staff to read other professional literature on teaching and learning.						

COMPONENT 7. RESEARCH AND DEVELOPMENT

VII. The IGE research and development activities which have been implemented in our school include: (Check One For Each Question)	Implementation: Don't Know	No	Some	Adequate	Approaching Ideal	Ideal
55. Identifying practical problems in implementing the IGE Program and searching for answers to ameloriate these.						
56. Field testing newly developed/prepared curriculum materials for possible system-wide adoption.						
57. Field testing innovative teaching techniques or learning programs for possible system-wide adoption.						

(CONTINUED TO RIGHT HAND COLUMN)

Since all "Don't know" responses are deleted from the final scoring procedures, this alternative should be used sparingly and only when confusion is very evident. Scoring of the survey can be computed by individual component and across the total IGE system. To this end, the instrument is scored by summing the assigned value of the response indicated for each statement (e.g., no implementation = 0, some implementation = 1, etc.); seven subtotals representing the seven IGE components and a total raw score can then be calculated. Having determined the total raw score, a "Percent of Implementation" score indicating the degree to which the IGE program in operation resembles the formal IGE model can be determined by calculating the total raw score, dividing by the perfect score possible and multiplying by 100. This is demonstrated by the formula below:

$$\text{Percent of Implementation} = \frac{\text{Total Raw Score}}{N(71 - \text{Don't knows}) \times 4} \times 100\%$$

(This formula can also be used to determine the progress toward implementation of individual components as well.)

As an example, let us suppose that fifteen (15) IGE teachers in the George Washington Elementary School completed the survey, with the following results tabulated:

- the combined total raw score of the 15 respondents was 2040
- 20 "Don't know" responses were checked

The calculation of the "Percent of Implementation" statistic for the total IGE program would look like this:

$$\text{Percent of Implementation} = \frac{2040}{15(71 - 20) \times 4} \times 100\%$$

$$= \frac{2040}{3060} \times 100\%$$

$$= 66\%$$

However, this statistic of 66% provides only a macro-glimpse at the total program implementation pattern. In order to determine which areas of program implementation may need further development, it would be necessary to compute the "Percent of Implementation" on a component basis as well.

Limitations

A number of limitations need to be cited with this approach to an IGE implementation evaluation. The principle shortcoming is that the instrument has not yet been statistically validated; the content validation of the instrument has been based on "expert" opinion alone and a field test of a preliminary version of the instrument to ascertain the perceptions of school practitioners to each of the seventy-one process outcomes regarding how they fit into an "ideal" IGE program. Secondly, the instrument is subject to temporal constraints. One can expect modifications, deletions or additions to the instrument as the IGE concept continues to develop and undergo refinement. Third, this instrument is subject to the variability of the perceptions of the respondents. Therefore it is requisite that before administration, some control and uniform procedures for administration are developed and adhered to. Finally, the user of the instrument should be cautioned about over-interpretation of the results. No criterion of implementation effectiveness or "Percent of Implementation" has been pre-established. It is likely that different schools will set a criterion unique to their own stage of development. Again it is worth repeating that the main purpose of the instrument is to provide an assessment of where an IGE program is implementing the formal IGE model, and to point out areas within (components) that may require further development or change so that appropriate and positive management intervention activities can be conducted. The use of the results for any other reason is questionable and strongly cautioned.

Implications For Research and Use

The application of implementation evaluation procedures through the "IGE Implementation Survey" has considerable implications for researchers of IGE, practicing administrators, and school boards.

The ability of this method and related instrument to document where an organization is implementing IGE as a system has the advantage of pointing out to administrators and other school personnel the areas where major developmental thrust(s) should be placed. In addition the documented need in the identified areas provides a more objective and rational basis upon which to request financial support from school boards and the community at large. These needs in turn can be translated into some real improvement-oriented goals.

For researchers, the opportunities to explore and improve IGE operations in a variety of areas is awesome. For example this method can lead to concerns of cost/benefit analyses. To accomplish this, it will be essential to determine the differential effects (degree of implementation) of IGE in relationship to outcomes such as achievement and attitude. In short, answers can be sought which describe what levels of output can be expected at varying stages of implementation. At the same time objective data can be collected to determine the worth of expenditures in relation to their probable effects.

Summary

The implementation of educational innovations like IGE poses a unique set of problems and challenges to educational decision-makers which often require non-traditional methods of problem solving. In spite of the push of the accountability movement toward an evaluation of program outputs, the myopic tendency of evaluators to identify and measure outcome variables alone seems to have considerable limitations in the evaluation of innovations. The educational literature has documented the need to apply developmental evaluation strategies to innovations which yield results that are improvement-oriented, and that can facilitate the delivery of total services to students

This paper presented a case and a method for a prerequisite approach to evaluating IGE operations using implementation evaluation and a comprehensive instrument, the "IGE Implementation Survey." The purpose of the instrument is to document where existing IGE programs are in implementing the formal IGE model and to point out the strengths,

weaknesses and omissions in the IGE implementation pattern. It is not capable of providing a qualitative assessment of "how well" the program is operating nor is this the intent to which this paper is directed. However, its use does have direct implications for local school district planning and for researchers who are developing cost/benefit studies of IGE.

Although the instrument proposed here has not yet been statistically validated its ability to provide accurate and useful information to directors of IGE has already been documented. Any comments, criticisms or recommendations that are derived from the reading of this paper or the use of the instrument in a field setting are welcomed.

Footnotes

1. Savage, David, "NIE Focus: Individually Guided Education." American Education. Volume 10, Number 10. December, 1974, p. 29.

2. Klausmeier, Herbert J., et al., *Individually Guided Education and the Multiunit Elementary School: Guidelines for Implementation,* Madison, Wisconsin Research and Development Center for Cognitive Learning, 1971, pp. 17-18.

3. *The Individualized Learning Letter,* Huntington, New York, T.I.L.L. Vol. 2, No. 9, January 4, 1973.

4. Charters, W.W. and Jones, John E., "On the Risk of Appraising Non-Events in Program Evaluation." *Educational Researcher,* November, 1973, vol. 1, pp. 5-7.

5. Gross, Neal, Giacquinta, Joseph B., and Bernstein, Marilyn, *Implementing Organizational Innovations: A Sociological Analysis of Planned Educational Change.* New York, Basic Books, 1971.

6. Ironside, Roderick, "The Fall 1972 Follow-up: A Supplement to the 1971-72 Nationwide Installation of the Multiunit/IGE Model for Elementary Schools." Durham, North Carolina. Educational Testing Service, Princeton, New Jersey, February, 1973.

7. Ashmore, William, "Summary Report: An Assessment of the Implementation of the Wisconsin Dells, Wisconsin, Individually Guided Education Program." Wisconsin Department of Public Instruction, Madison, Wisconsin. January 1975.

8. Knezevich, Stephen, *Program Budgeting (PPBS), A Resource Allocation Decision System for Education,* McCutchan Publishing Corporation, 1973.

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